



Fact Sheet

California Environmental Protection Agency



REDUCTION OF EMISSIONS FROM USE OF SMALL CONTAINERS OF AUTOMOTIVE REFRIGERANT

The California Air Resources Board (ARB) developed a regulation to reduce refrigerant emissions from the Do-It-Yourself (DIY) servicing of motor vehicle air conditioners (MVAC) such as those in cars and pickup trucks. The Board will consider adopting this regulation in January 2009.

Why is ARB staff proposing this regulation?

The purpose of the regulation is to reduce emissions of greenhouse gases (GHG). The current automotive refrigerant (R-134a) is a highly potent GHG. The global warming potential (GWP) of the refrigerant in a single 12-ounce container is equivalent to the CO₂ emissions from a typical California automobile driven over 1,000 miles. The regulation will help prevent unnecessary releases of the refrigerant to the atmosphere and applies to automotive refrigerants with a GWP value greater than 150. It applies to containers holding more than 2 ounces and less than 2 pounds of refrigerant by weight.

Who must comply with the regulation?

This regulation will affect consumers who recharge MVAC systems, the retailer who sells the product, and companies that package, distribute, or market the small cans of refrigerant.

What are the estimated emission reductions of the regulation?

The regulation is estimated to reduce R-134a emissions by about 260,000 metric tons of carbon dioxide equivalent (MTCO₂E) per year, which is equivalent to avoiding about 600 million miles of driving by typical California passenger cars.

What are the estimated costs?

Product manufacturers estimate that the cost of a small container of automotive refrigerant will increase by about \$1. A \$10 refundable deposit will be required at time of purchase. Consumers who return the container to the business where it was purchased within 90 days will receive their deposit. The cost-effectiveness of the regulation is about \$11 per metric ton of CO₂ equivalent emissions reduced.



What does the regulation require?

The regulation has four new requirements: 1) use of a self-sealing valve on all containers, 2) improved labeling instructions, 3) a recycling program for used containers, and 4) an education program that emphasizes best practices for vehicle recharging. Manufacturers will submit an application to ARB to certify their small cans prior to sale in California.

Self-sealing Valve and Improved Labeling

Manufacturers and packagers must install a self-sealing valve on all small containers subject to this regulation to prevent refrigerant from venting to the atmosphere. They must also use improved labeling on small containers, including improved instructions for use, and a statement that it is illegal to destroy or discard the container or its contents.

Recycling Program

The recycling program involves consumers, retailers, and manufacturers. A \$10 deposit will be required for each container of automotive refrigerant at the time of purchase. Containers are required to be returned within 90 days, with proof of purchase, for refund of the deposit. Retailers will collect all used small containers from consumers and return them to the original manufacturer for recycling. Retailers are not required to refund the deposit after the 90 day period, without proof of purchase, or for containers that have been punctured, damaged or breached. Manufacturers will then recover any refrigerant remaining in the container and recycle the steel can. Manufacturers, distributors, retailers (upon ARB request), and recyclers must report to ARB data on sales, returned containers, and the amount of refrigerant recycled annually.



Education Program

The education program will be administered by manufacturers and producers. It is their responsibility to develop educational brochures for distribution to consumers (through retailers) and maintain an informative website. The brochures and website must include instructions to identify and repair system leaks, best practice techniques for recharging an MVAC system, environmental hazards associated with the refrigerant, risks of overcharging or undercharging the MVAC, and the recycling program.

When does the regulation take effect?

The proposed regulation will take effect January 1, 2010. Automotive refrigerant in small containers manufactured before January 1, 2010 may be sold by retailers until December 31, 2010.

Will there be other regulations to reduce refrigerant emissions?

Yes. ARB is developing additional regulations or other measures to address emissions of refrigerants used for motor vehicle air conditioning and other applications including: a new requirement to use refrigerants with a lower global warming impact in new cars, buses, trucks, and equipment in California; recovery of refrigerant from decommissioned refrigerated shipping containers; enforcement of a federal ban on refrigerant release during servicing and dismantling; emission reductions during professional servicing; and reduction of emissions from stationary sources such as grocery stores and refrigerated warehouses.

Where can I find more information about the regulation?

The regulation and accompanying documents are available at <http://www.arb.ca.gov/cc/hfc-mac/hfc-mac.htm>. For further information, contact Mr. Winston Potts, P.E., Research Division, ARB at wpotts@arb.ca.gov or phone (916) 323-2537.